

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (CURRENTLY AMENDED) A data compressing apparatus generating code data from a character train stream constructed by a structured document including tags as identification information for expressing a document structure, comprising:

a tag information separating unit separating the identified tag from the character train stream and outputting as a tag information stream;

a tag code replacing unit arranging a tag code for identification to a position of the character train stream in which the identified tag was separated by the tag information separating unit and outputting a tag replaced character train stream; and

a character train coding unit coding the tag replaced character train stream including the tag code outputted from the tag code replacing unit and outputting a code stream;

a tag information storing unit storing the tag information stream separated by the tag information separating unit;

a code storing unit storing the code stream formed by the character train coding unit; and
a code switching unit alternately separating the tag information stream stored in the tag information storing unit and the code stream stored in the code storing unit and outputting the separated stream.

2. (ORIGINAL) An apparatus according to claim 1, wherein said tag code replacing unit arranges a predetermined fixed code as said tag code to the position of the character train stream in which the tag was separated.

3. (ORIGINAL) An apparatus according to claim 1, wherein said tag code replacing unit arranges a tag code indicative of an appearing order of the tag separated by said tag information separating unit to the position of the character train stream in which the tag was separated.

4. (CANCELED)

5. (CURRENTLY AMENDED) An apparatus according to claim 1, wherein said character train coding unit comprises:

a dictionary storing unit for-storing a dictionary in which a character train serving as a processing unit when compressing has been registered; and

a character train comparing unit for-comparing a partial character train in the character train stream from said tag code replacing unit with the registration character train in said dictionary storing unit, thereby detecting a partial character train which coincides with said registration character train, allocating a predetermined code every said detected partial character train, and outputting a resultant character train.

6. (CURRENTLY AMENDED) An apparatus according to claim 1, further comprising a tag information compressing unit for-compressing the tag information separated by said tag information separating unit.

7. (CURRENTLY AMENDED) An apparatus according to claim 1, further comprising:

a tag dictionary storing unit for-storing a dictionary in which a tag character train in the tag information serving as a processing unit when compressing has been registered; and

a tag character train comparing unit for-comparing the partial character train of the character train stream included in the tag information separated by said tag information separating unit with the registration character train in said tag dictionary storing unit, thereby detecting a partial character train which coincides with said registration character train, allocating a predetermined code every said detected partial character train, and outputting a resultant character train.

8. (CURRENTLY AMENDED) An apparatus according to claim 4, further comprising a tag position detecting unit for-detecting a position of the tag in the code data formed by said character train coding unit,

and wherein both the tag information separated by said tag information separating unit and designation information of the tag position detected by said tag position detecting unit are stored in said tag information storing unit.

9. (ORIGINAL) An apparatus according to claim 8, wherein said tag position detecting unit detects the code amount from the head of a document or a specific tag and stores it together with the tag information into said tag information storing unit.

10. (CURRENTLY AMENDED) A data reconstructing apparatus reconstructing character train data from a code stream including a tag information stream separated from a character train stream of a structured document including tags as identification information for expressing a document structure and a code data stream obtained by encoding a character train stream in which a tag code has been arranged at a position of the separated tag, comprising:

a tag information separating unit separating the tag information stream and the code data stream from the code stream;

a tag information storing unit storing the tag information stream separated by the tag information separating unit; and

a character train reconstructing unit reconstructing the character train data including the character train and the tag code from the code data stream and, thereafter, replacing the tag code by the tag information stream stored in the tag information storing unit.

11. (CURRENTLY AMENDED) An apparatus according to claim 10, wherein said character train reconstructing unit comprises:

a dictionary storing unit for storing a dictionary in which a reconstruction character train corresponding to a code of the character train serving as a processing unit when reconstructing has been registered;

a character train comparing unit for separating a code of the character train serving as a reconstruction unit from said code stream and reconstructing the original character train with reference to said dictionary storing unit; and

a character train replacing unit for replacing the tag code reconstructed by said character train comparing unit by the tag information in said tag information storing unit.

12. (CURRENTLY AMENDED) An apparatus according to claim 10, further comprising a tag information reconstructing unit for reconstructing compression data of the tag information stored in said tag information storing unit.

13. (CURRENTLY AMENDED) An apparatus according to claim 10, further comprising:

a tag dictionary storing unit for-storing a dictionary in which a reconstruction character train corresponding to a code of a tag character train serving as a processing unit when reconstructing has been registered; and

a tag character train comparing unit for-separating a code of the tag character train serving as a reconstruction unit from the tag information separated by said tag information separating unit and reconstructing the original tag character train with reference to said dictionary storing unit.

14. (CURRENTLY AMENDED) A data compressing method of generating code data from a character train stream constructed by a structured document including tags as identification information for expressing a document structure, comprising:

separating the identified tag from the character train stream and outputting as-a tag information stream;

arranging a tag code for identification to a position of the character train stream in which the identified tag was separated and outputting a tag replaced character train stream; and

coding the tag replaced character train stream including the tag code and outputting a code stream;

storing the tag information stream;

storing the code stream; and

alternately separating the tag information stream and the code stream and outputting the separated stream.

15. (CURRENTLY AMENDED) A method, comprising:

receiving a character train stream;

discriminating tags in the character train stream;

separating the discriminated tags from the character train stream;

transmitting the separated discriminated tags as a tag information stream;

arranging a predetermined tag code at a tag position of the character train stream from which the discriminated tags have been separated and outputting a tag replaced character train stream;

encoding the tag replaced character train stream that includes the predetermined tag code and outputting a code stream; and

alternately separating the tag information stream and the code stream and transmitting the encoded character train streamoutputting the separated stream.

16. (PREVIOUSLY PRESENTED) The method of claim 15, further comprising:
comparing the character train stream with a tag identification rule; and
switching between outputting the tag information stream and the encoded character train stream.
